#Python - Worksheet 1 (Qs. 11 to 15)

In [7]:
```
# Qs. 11 Factorial of a number

n = int(input("Enter an integer "))
f = 1

# Check if n is negative, zero or positive

if n<0:
    print("Sorry factorial is not present for negative numbers")
elif n==0:
    print("The factorial of 0 is 1")
else:
    for i in range(1,n+1):
        f = f * i
    print("The factorial of", n, "is", f)
```

```
Enter an integer 7
The factorial of 7 is 5040
```

In [10]:
```
# Qs. 12 Prime or composite number

num = 29

# Take input from user

num = int(input("Enter a number "))

# Define a flag variable

flag = False

# prime numbers are greater than 1

if num>1:

    # check for factors

    for i in range(2,num):
        if num%i==0:
            # If factors are found set flag to True
            flag = True
            # Break out of loop
            break

# check if flag is True

if flag==True:
    print("The number is a composite number")
else:
    print("The number is a prime number")
```

```
Enter a number 29
The number is a prime number
```

In [21]:
```
# Qs. 13 String is palindrome or not

# Take input from the user

s = input("Enter string ")
# suitable for caseless comparison
s=s.casefold()
s1 = s[::-1] # reverse the string
print(s1)
if list(s)==list(s1): # check if the string are same
    print("The string is palindrome")
else:
    print("The string is not palindrome")
```

```
Enter string Level
level
The string is palindrome
```

In [1]:
```
# Qs. 14 Third side of a right angled
# traigle from two given sides

import math

# Take input from the user

a=float(input("Enter the first side "))
b=float(input("Enter the second side "))
y=(a**2)+(b**2)
# The third sie
c=math.sqrt(y)
print("The third side of a right angled triangle is", c)
```

```
Enter the first side 3
Enter the second side 4
The third side of a right angled triangle is 5.0
```

In [2]:
```
# Qs. 14 Alternative solution

# Take input from user
a=float(input("Enter the first side "))
b=float(input("Enter the second side "))
y=(a**2)+(b**2)
# The third side
c=y**0.5
print("The third of a right angled traingle is", c)
```

```
Enter the first side 3
Enter the second side 4
The third of a right angled traingle is 5.0
```

In [2]:
```
# Qs. 15 Frequency of characters in a string

# Take input from user

test_str = input("Enter string ")

# count of each character in the string

all_freq = {}

for i in test_str:
    if i in all_freq:
        all_freq[i]+=1
    else:
        all_freq[i]=1

print("The count of all characters in", test_str, "is : \n "
     + str(all_freq))
```

```
Enter string Mississippi
The count of all characters in Mississippi is :
 {'M': 1, 'i': 4, 's': 4, 'p': 2}
```

In [ ]:
```

```